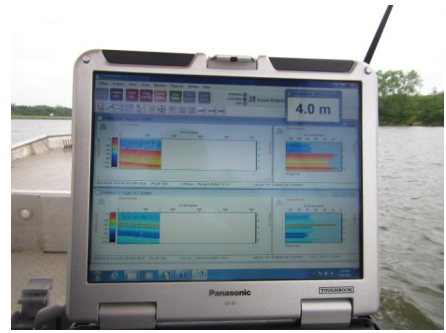


Current Projects - Technology & Data Management

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Listening to Iowa Lakes; what we can learn from sound.

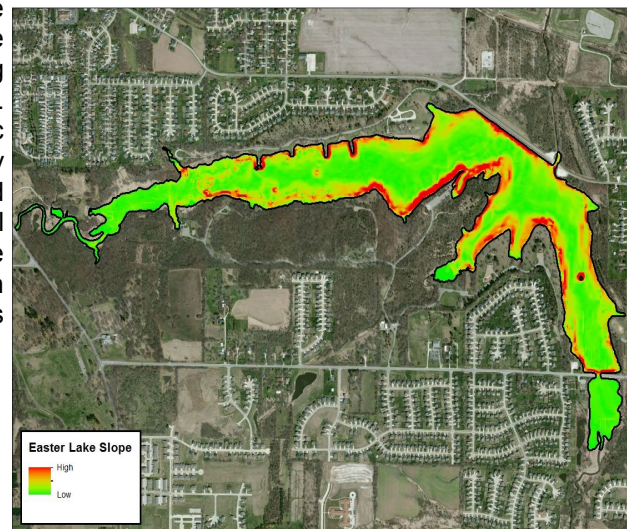
How many times have you been fishing and heard someone say, “I wish I could see what is down there.” With recent advancements in technology we can get a very good picture of what is on the bottom, what the bottom is composed of, and how deep the lake is at any specific location on the water. If interpreted correctly this can equal more time setting hooks and less time fishing unproductive areas.

Hydroacoustics may be a long word but it is relatively easy to interpret. “Hydro”, meaning water and “acoustics” meaning sound is simply passing sound through water and listening for an echo after the sound wave bounces off of something in the water column. Underwater acoustics have been around since the early 1900’s but this technology received relatively little attention until the first world war when the military started improving acoustic equipment in boats and submarines. Fish finders in boats and ice shacks are probably the most common underwater acoustics. Since introduction hydroacoustics have been used to collect data on fish, bottom type, aquatic vegetation, and just about anything found in the water. Our goal is to use these data to provide high quality maps for Iowa’s anglers and information lake managers need to improve fishing.

Some of Iowa’s lakes have been surveyed over the last 10 years using hydroacoustic equipment and maps are available at www.iowadnr.gov. The new maps are easier to read than the original maps created in the 1970’s and 1980’s. In addition to being easier to read, many have been updated. Every time it rains sediment runs off the landscape surrounding the lake, this sediment collects in the bottom of the lake and then over time creates shallow water areas. New maps show these changes in water depth and guides anglers to other areas if they are seeking deep water.

The new maps can also help management biologists improve fishing opportunities around the state. For example, many of our lakes in southern Iowa are man made and fish habitat is added to concentrate fish. Cedar tree piles and pea gravel spawning beds are commonly used in these types of lakes. Managers need to place these structures in specific water depths and in areas anglers can access. By providing management biologists with detailed information about the lake they can make well informed decisions. These habitat structures are also shown on the lake maps and are marked with GPS coordinates. Anglers can put the coordinates into a GPS unit and go straight to the structure.

Lake restoration work also relies on data collected from hydroacoustic surveys. When a lake is restored money to complete restoration work is limited and a project can easily cost millions of dollars. Acoustic data can assist in determining where money should be spent to get the greatest benefit.



Map representing percent slope of Easter Lake.